

ABSTRACT

An illumination system has a light source and a wavelength conversion layer within a light-recycling envelope. The light source is a light-emitting diode or a semiconductor laser. The light source will emit light of a first wavelength range that is transmitted through the wavelength conversion layer in order to convert a portion of the light of a first wavelength range into light of a second wavelength range. Light of both the first and second wavelength ranges will exit the light-recycling envelope through an aperture. The recycling of the light by the light-recycling envelope will enhance the output radiance and luminance of the light exiting the illumination system.